2. (Unchanged) The method of claim 1, wherein the network employs a non-deterministic access protocol.

3. (Unchanged) The method of claim 2, wherein the non-deterministic access protocol is Carrier Sense Multiple Access with Collision Detection (CSMA/CD).

A3

5. (Amended) The method of claim 1, wherein the one or more bandwidth parameters include [a maximum bandwidth.] an indication regarding a maximum sustained bandwidth the at least one traffic group can realize over a defined time period.

6. (Amended) The method of claim [1,] 5, wherein the one or more bandwidth parameters include an indication regarding a peak bandwidth representing a bandwidth the at least one traffic group may utilize during a particular time interval in excess of the maximum bandwidth.

9. (Amended) The method of claim 1, further comprising [the steps of]:
classifying the packet as being associated with the at least one traffic group; and
determining a quality of service queue with which the at least one traffic group is associated.

A4

10. (Amended) The method of claim 1, further comprising [the steps of]:
enqueuing the packet onto a queue associated with the traffic group;
determining a current bandwidth metric for the queue; and
dequeuing the packet from the queue if the current bandwidth metric meets a predetermined relationship with the one or more bandwidth parameters.

11. (Amended) The method of claim 10, wherein the current bandwidth metric is evaluated periodically at the expiration of a predetermined time period, and

wherein the step of determining a current bandwidth metric for the queue further comprises [the steps of]:

determining an actual bandwidth for a prior time period;

determining a bandwidth metric for the prior time period; and

combining a portion of the actual bandwidth for the prior time period with a portion of the bandwidth metric for the prior time period to arrive at the current bandwidth metric.

cont #4

12. (Amended) A method of bandwidth management and traffic prioritization for use in a network of devices, the method comprising [the steps of]:

defining at a packet forwarding device information indicative of one or more traffic groups;

defining at the packet forwarding device information indicative of a quality of service (QoS) policy for [at least one of] the one or more traffic groups, the QoS policy including at least a minimum bandwidth parameter indicating a minimum amount of bandwidth the one or more traffic groups need to be provided over a defined time period;

receiving a packet at a first port of a plurality of ports;

identifying a first traffic group of the one or more traffic groups with which the packet is associated; and

scheduling the packet for transmission from a second port of the plurality of ports based upon the QoS policy for the first traffic group, and wherein the scheduling is independent of end-to-end signaling.

13. (Unchanged) The method of claim 12, wherein the network of devices employs a non-deterministic access protocol.

14. (Unchanged) The method of claim 13, wherein the non-deterministic access protocol is Carrier Sense Multiple Access with Collision Detection (CSMA/CD).

15. (Amended) The method of claim 12, further comprising [the steps of]:
providing a plurality of QoS queues; and
mapping the first traffic group to a first QoS queue of the plurality of QoS queues.

16. (Amended) The method of claim 15, further comprising [the steps of]:
determining a current bandwidth metric for each of the plurality of QoS queues;
dividing the plurality of QoS queues into at least a first group and a second group based upon the current bandwidth metrics and a minimum bandwidth requirement associated with each of the plurality of QoS queues;
if the first group includes at least one QoS queue, then transmitting a packet from the at least one QoS queue; otherwise transmitting a packet from a QoS queue associated with the second group.

17. (Amended) A method [of bandwidth management and traffic prioritization for use in a network of devices, the method] comprising [the steps of]:
receiving at a packet forwarding device information indicative of one or more traffic groups;
receiving at the packet forwarding device information defining a quality of service (QoS) policy for at least one of the one or more traffic groups, the QoS policy including at least a minimum bandwidth[;] indicating a minimum amount of bandwidth the at least one traffic group needs to be provided over a defined time period;
providing a plurality of queues at each of a plurality of output ports;
associating the one or more traffic groups with the plurality of queues based upon the minimum bandwidth; and
scheduling a packet for transmission from one of the plurality of queues onto the network.

18. (Unchanged) The method of claim 17, wherein the information indicative of the one or more traffic groups includes Internet Protocol (IP) subnet membership.

19. (Unchanged) The method of claim 18, wherein the information indicative of the one or more traffic groups includes a media access control (MAC) address.

20. (Unchanged) The method of claim 17, wherein the information indicative of the one or more traffic groups includes a virtual local area network (VLAN) identifier.

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28. (Amended) A method of bandwidth management for use in a packet forwarding device participating in a connectionless network, the method comprising [the steps of]:

receiving at a packet forwarding device information indicative of one or more traffic groups;

receiving at the packet forwarding device one or more bandwidth parameters for at least one of the one or more traffic groups[;], the bandwidth parameters including at least a minimum bandwidth indicating a minimum amount of bandwidth the at least one traffic group needs to be provided over a defined time period;

receiving at a first port of a plurality of ports a packet associated with the at least one traffic group; and

scheduling the packet for transmission from a second port of the plurality of ports based upon the one or more bandwidth parameters for the traffic group with which the packet is associated.

29. (Amended) A packet forwarding device for use in a network employing a non-deterministic assess protocol, the packet forwarding device comprising:

an input unit configured to receive information defining one or more traffic groups and one or more associated bandwidth parameters[;], the one or more associated bandwidth parameters including minimum bandwidth indicating a minimum amount of bandwidth the traffic group needs to be provided over a defined time period;

a plurality of ports configured to transmit packets onto an attached network segment, each port having a plurality of queues and configured to select a queue of the plurality of queue from which to transmit a next packet based upon the one or more bandwidth parameters; and

a filtering and forwarding engine coupled to the plurality of ports and configured to process received packets, the filtering and forwarding engine identifying a traffic group of the one or more traffic groups with which a received packet is associated and queuing the received packet for transmission from one of the plurality of ports based upon the identified traffic group.

35. (Amended) A machine-readable medium having stored thereon data representing sequences of instructions, said sequences of instructions which, when executed by a processor, cause said processor to perform [the steps of]:

receiving at a packet forwarding device information indicative of one or more traffic groups;

receiving at the packet forwarding device information defining a quality of service (QoS) policy for at least one of the one or more traffic groups[;], the QoS policy including at least a minimum bandwidth indicating a

minimum amount of bandwidth the at least one traffic groups needs be provided over a defined time period;

receiving a packet at a first port of a plurality of ports;

identifying a first traffic group of the one or more traffic groups with which the packet is associated; and

scheduling the packet for transmission from a second port of the plurality of ports based upon the QoS policy for the first traffic group, and wherein the scheduling is independent of end-to-end signaling.

Please add the following new claims:

36. (New) The method of claim 1, wherein QoS profile attributes associated with each of the one or more traffic groups include a maximum delay, specifying a time period beyond which further delay cannot be tolerated for the particular traffic group.

37. (New) The method of claim 1, wherein the other QoS profile attributes associated with each of the one or more traffic groups include a Relative Priority, defining the relative importance of a particular traffic group with respect to other traffic groups.

38. (New) A method comprising:

receiving at a packet forwarding device information indicative of one or more traffic groups;

receiving at the packet forwarding device one or more bandwidth parameters for at least one of the one or more traffic groups;

receiving at a first port of a plurality of ports a packet associated with the at least one traffic group;

enqueuing the packet onto a queue associated with the at least one traffic group;

scheduling the packet for transmission from a second port of the plurality of ports based upon the one or more bandwidth parameters for the at least one traffic group with which the packet is associated by

periodically evaluating a current bandwidth metric for the queue; by

determining an actual bandwidth for a prior time period;

determining a bandwidth metric for the prior time period; and

combining a portion of the actual bandwidth for the prior time period with a portion of the bandwidth metric for the prior time period to arrive at the current bandwidth metric; and

dequeuing the packet from the queue if the current bandwidth metric meets a predetermined relationship with the one or more bandwidth parameters.